

REMARKS

In the June 17, 2008 Office Action, all of pending claims 1-4 and 6-12 stand rejected in view of prior art. Claim 1 also appears to have been rejected for failing to indicate and claim particularly and distinctly the subject matter that Applicant regards as the invention. The Office Action identifies claim 22 in the indefiniteness rejection. However, this application does not contain a claim 22, and the alleged indefinite language appears to be from claim 1. No other objections or rejections were made in the Office Action.

Status of Claims and Amendments

In response to the June 17, 2008 Office Action, Applicant has amended claims 1 and 12 as indicated above. Thus, claims 1-4 and 6-12 are pending, with claims 1 and 12 being the only independent claims. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

Interview Summary

On October 6, 2008, the undersigned conducted a personal interview with Examiner Duff, who is in charge of the above-identified patent application. Applicant wishes to thank Examiner Duff for the opportunity to discuss the above-identified patent application during the Interview of October 6, 2008.

Generally, the undersigned argued that the arrangement set forth in Independent claim 1 is not disclosed or suggested by U.S. Patent No. 4,992,032 (Barito). Additionally, the undersigned argued that even though the exact language of claim 1 is not found in the specification, the limitation added to claim 1 by the prior amendment is supported by the original disclosure. Examiner Duff indicated that mainly the term "track" concerned him since this term has a meaning not clearly apparent from the original disclosure. Examiner Duff suggested changing the term "track" to - -path- - since it appears this is the intent. Applicant wishes to thank Examiner Duff for the helpful suggestion. In response, Applicant has amended claim 1 to use the term - -path- - instead of "track" as suggested by the Examiner.

Generally, the undersigned argued the following during the Interview. In the corresponding Japanese application and the PCT international application, patentability has

already been allowed by specifying the location of the center of a pressing force in the axial direction of the pressing mechanism with respect to the discharge ports as set forth in independent claim 1. Moreover, such Amendment was not objected to as unsupported by the original disclosure in the corresponding Japanese application and the PCT international application.

None of the cited references specifies the location of the center of a pressing force with respect to the discharge ports as set forth in independent claim 1, and thus, the present U.S. application should be allowed because it includes this arrangement, i.e., the same amendment as in the Japanese application or the PCT application (under Article 34).

The reference Fig. 1 contains two figures: one shows a track of the center of buoyancy generated by difference pressure on end plates of a scroll compressor, and the other shows a track of the center of buoyancy on end plates of a coplanar two cylinder rotary compressor (compressor of the present invention). In scroll compressors except for those in a particular structure such as asymmetric scroll compressors, when a load on the wrap wall of the scroll is ignored, *buoyancy on the end plates moves on a circular track (path) with a radius of half the eccentric amount around the rotation center of the main axis*. The track of buoyancy does not change substantially, even when the operating condition changes.

In the presently claimed coplanar two cylinder rotary compressor, the center of buoyancy generated by difference pressure on the end plates moves in a range about between 180° and 360° , *over the range of the track (path) with a radius of the eccentric amount*, when the direction toward the oscillation center (the upper side of the figure) with respect to the center of the drive shaft (33) is set 0° . This type of compressor has larger buoyancy fluctuation than a scroll compressor. As shown in the figure, the maximum buoyancy is generated in a range between 270° and 360° , outside the track with a radius of the eccentric amount. The range coincides with the range in which the discharge ports (45, 46) exist with respect to the drive shaft (33). Different from in a scroll compressor, the genesis location of this track (path) of buoyancy changes in accordance with high-low fluctuation in pressure caused by the operating condition, but the above angle range does not change. Setting the center of the pressing force in the axial direction within the generating range of the maximum buoyancy is important in designing a pressing mechanism (60).

Accordingly, in the presently claimed compressor, *the center of a pressing force in the axial direction is set outside the path (track) with a radius of the eccentric amount of*

the eccentric rotation body (21, 22) with respect to the center of the drive shaft (33) and eccentric to the discharge ports (45, 46) away from the center of the end plates (26A, 26B) of the eccentric rotation body. This is clearly shown in Reference Fig. 2, which is the originally filed Fig. 2 of the present application, with the path (track) with a radius of the eccentric amount and the center of the pressing force in the axial direction added. Thus, independent claim 1 does not include any new matter and is fully supported by the original disclosure, especially in view of the change of the term "track" to - -path- - by the current Amendment.

In any case, none of references discloses setting the center of a pressing force in the axial direction outside the track (path) with a radius of the eccentric amount of the eccentric rotation body with respect to the center of the drive shaft and eccentric to the discharge ports away from the center of the end plates of the eccentric rotation body. As above, the present invention sets the center of a pressing force in the axial direction in a technical idea different from that of the references. Thus, the present claimed compressor of independent claim 1 cannot be anticipated by any of the references, or rendered obvious even if they were combined.

[Reference Fig. 1]

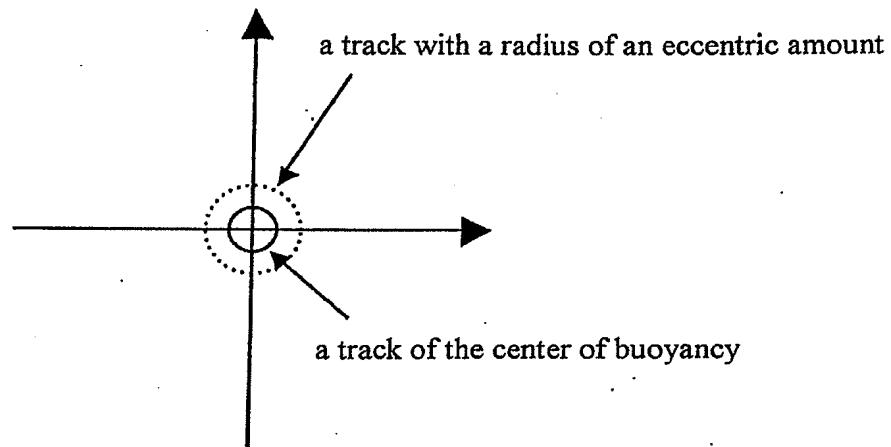


Fig.: a track of the center of buoyancy generated by difference pressure on the end plates of the scroll compressor

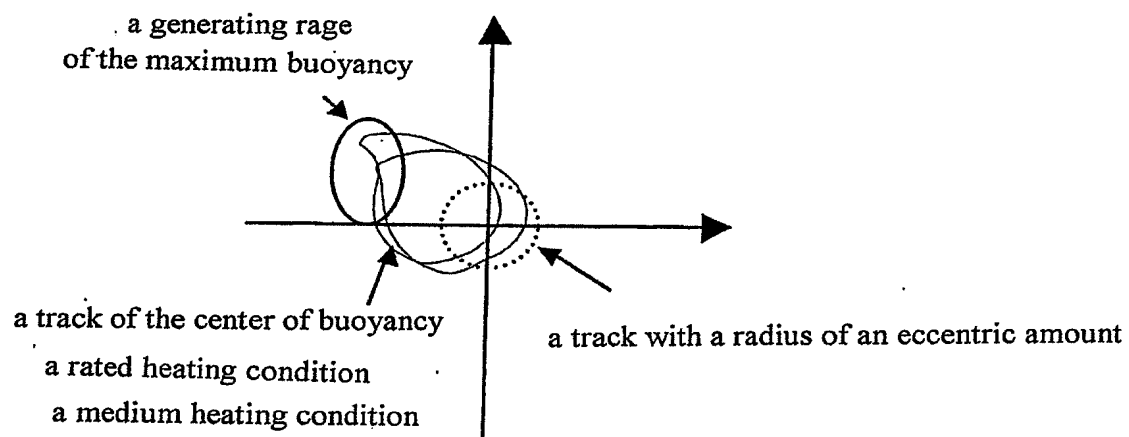
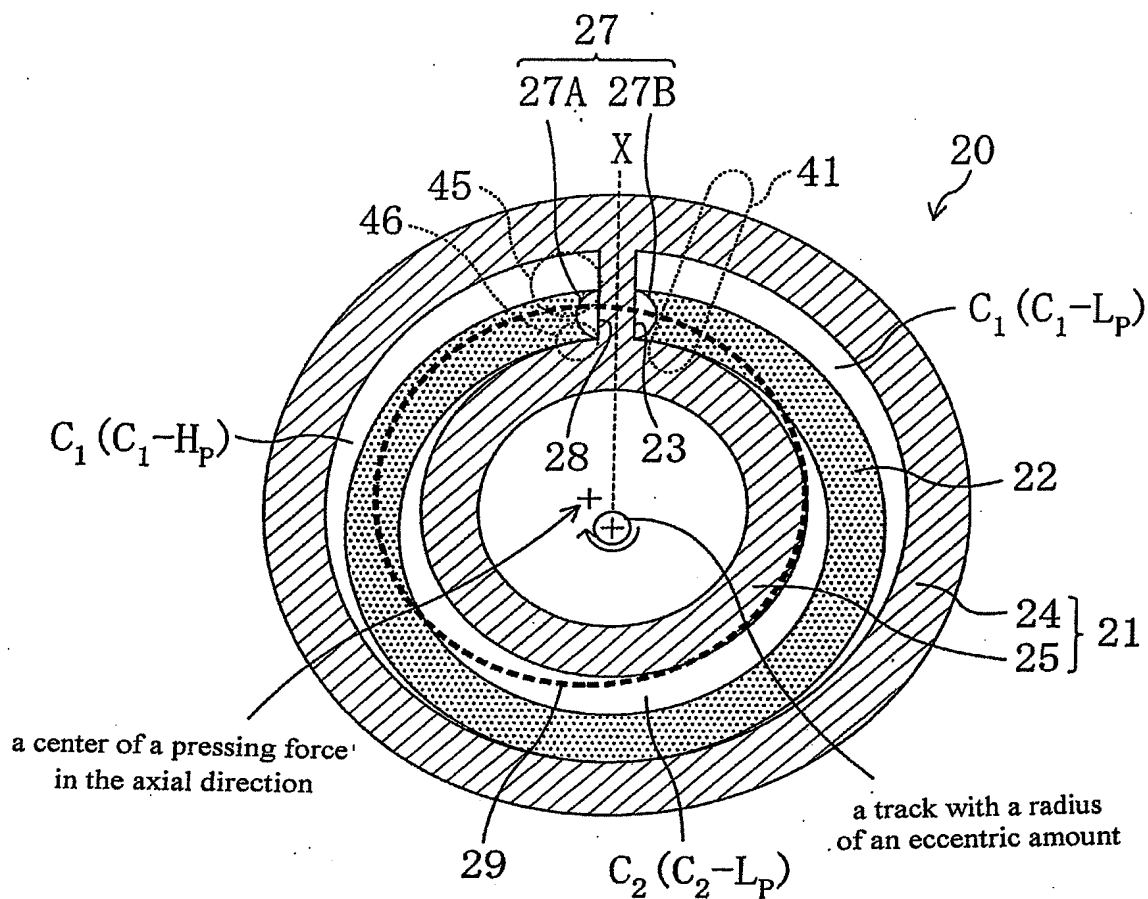


Fig.: a track of the center of buoyancy on the end plates of a coplanar two cylinder rotary compressor

[Reference Fig. 2]



Claim Rejections - 35 U.S.C. §112

In paragraph 2 of the Office Action, claim 22 was rejected under 35 U.S.C. §112, second paragraph. As mentioned above, the Office Action identifies claim 22 in the indefiniteness rejection. However, this application does not contain a claim 22, and the alleged indefinite language appears to be from claim 1. In response, Applicant has amended claim 1 to change the term "track" to - -path- - based on the Interview, as mentioned above. Applicant believes that the arrangement of independent claim 1, as now amended, is fully supported by the original disclosure.

Note original Figures 2-4 of the instant application, in which the arrangement of independent claim 1 can be clearly seen, Applicant believes that the claims now comply with 35 U.S.C. §112, first paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections - 35 U.S.C. § 102

In paragraphs 4-7 of the Office Action, claims 1-3 and 6-12 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,992,032 (Barito). In response, Applicant has amended independent claims 1 and 12 to more clearly define the present invention over the prior art of record.

Claims 1-3 and 6-11

In particular, independent claim 1 now requires the pressing mechanism generating a pressing force in the axial direction, the pressing mechanism having a center that is outside a path with a radius of an eccentric amount of the eccentric rotation body with respect to the center of the drive shaft and eccentric to the discharge ports away from a center of the cylinder side or piston side end plate of the eccentric rotation body. Clearly, this structure is **not** disclosed or suggested by the Barito patent or any other prior art of record.

Specifically, as mentioned above, in scroll compressors except for those in a particular structure such as asymmetric scroll compressors, when a load on the wrap wall of the scroll is ignored, ***buoyancy on the end plates moves on a circular track (path) with a radius of half the eccentric amount around the rotation center of the main axis.*** The track of buoyancy does not change substantially, even when the operating condition changes. Thus, the Barito patent cannot anticipate the arrangement of independent claim 1 or its

dependent claims 2, 3 and 6-11. Accordingly, withdrawal of this rejection of these claims is respectfully requested.

Claim 12

Independent claim 12 now requires, *inter alia*, the cylinder having a slit that is formed at a portion eccentric from a center of the eccentric rotation body in a face portion opposite a face on a cylinder chamber side of the cylinder side end plate of the eccentric rotation body, the slit being disposed on only one side of the cylinder and the pressing mechanism allowing pressure of fluid discharged outside the compression mechanism to work on the slit. The Amendment to independent claim 12 is clearly supported by at least paragraph [0037] and Figure 6 of the original disclosure. Clearly, this structure is *not* disclosed or suggested by the Barito patent or any other prior art of record.

Specifically, the so-called slit (10-5, 10-7) of the Barito patent is formed on both sides as seen in Figures 2 and 4. Thus, the Barito patent cannot anticipate independent claim 12. Accordingly, withdrawal of the rejection of independent claim 12 is respectfully requested.

Rejections - 35 U.S.C. § 103

In paragraphs 9 and 10 of the Office Action, claim 4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Barito patent in view of U.S. Patent No. 2,073,101 (Fox). In response, Applicant respectfully traverses this rejection, especially in view of the amendment to independent claim 1.

Specifically, since the seals of the Barito patent move and/or are centered on the eccentric part of the drive shaft, even if used with the C-shaped piston type compressor of the Fox patent, a center of buoyancy of as set forth in independent claim 1 would not result. Note Figure 2 of the instant application as compared to Figures 3 and 5 of the Barito patent. Accordingly, Applicant respectfully requests that this rejection be withdrawn in view of the above comments and amendments.

* * *

In view of the foregoing amendment and comments, Applicant respectfully asserts that claims 1-4 and 6-12 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

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